

Table S1 Descriptive statistics and ranking of each quality of life scale and its sub-topics (n = 498)

Quality of Life Questionnaire	average value	Standard deviation	Sort
I. Physiological category subscale			
Q1. Are you satisfied with your ability to engage in daily activities ?	3.60	0.76	1
Q2. Is your ability to move around ?	3.50	1.07	2
Q3. Do you think physical pain will prevent you from doing what you need to do ?	3.48	1.08	3
Q4. Are you satisfied with your sleep condition ?	3.45	0.96	4
Q5. Do you have enough energy in your daily life ?	3.44	0.97	5
Q6. Are you satisfied with your working ability ?	3.43	0.84	6
Q7. Do you need medical help for daily life?	3.32	1.17	7
Total score of Physiological category	13.83	2.64	
II.The psychological category subscale			
Q8. Are you satisfied with yourself ?	3.77	0.79	1
Q9. Can you accept your appearance ?	3.76	0.83	2
Q10. Do you think your life is meaningful ?	3.64	0.95	3
Q11. Do you often have negative feelings ? (Such as worry, sadness, tension, anxiety, depression, etc.)	3.50	0.94	4
Q12. Do you enjoy life ?	3.41	1.01	5
Q13. How good is your ability to concentrate (including thinking, learning, and memory)?	3.25	0.97	6
Total score of Psychological category	14.19	2.53	
III .The social relationship category subscale			
Q14. Are you satisfied with your relationships ?	3.82	0.77	1
Q15. Are you satisfied with your friend's support ?	3.77	0.75	2
Q16. Do you think you have face or respect?	3.48	1.01	3
Q17. Are you satisfied with your sex life ?	3.37	0.94	4
Total score of social relations category	14.43	2.46	
IV. The environmental category subscale			

Q18. Are you satisfied with the condition of your residence ?	3.87	0.73	1
Q19. Is your environment healthy ? (E.g.pollution, noise, climate, landscape, etc.)	3.75	0.87	2
Q20. Are you satisfied with the transportation method used ?	3.69	0.78	3
Q21. Are you satisfied with the convenience of health care services ?	3.64	0.73	4
Q22. Do you feel safe in everyday life ?	3.63	0.90	5
Q23. Can you usually eat the food you want ?	3.60	1.20	6
Q24. Do you have the opportunity to engage in leisure activities ?	3.27	1.22	7
Q25. Can you easily get the information you need for daily life ?	3.25	0.98	8
Q26. Do you have enough money for your needs?	3.02	1.12	9
Total score of environmental category score	14.10	2.53	
Q27. Overall evaluation of quality of life	3.63	0.80	
Q28. Overall satisfaction with your health	3.39	0.94	
Total score of quality of life score	56.56	8.78	

Table S2. Differences in the presence or absence of pain and demographic variables (n = 498)

Variable	No pain feeling, n (%)	Have pain feeling, n (%)	p-value
Gender			
Female	102(31.2%)	225(68.8%)	0.653
male	50(29.2%)	121(70.8%)	
Race			
Reference ethnic	51(38.1%)	83(61.9%)	0.027
Natives	101(27.7%)	263(72.3%)	
education level			
illiterate	23(29.9%)	54(70.1%)	0.893
Literacy	129(30.6%)	292(69.4%)	
Marital status			
No spouse or cohabitee	78(29.9%)	183(70.1%)	0.800
Have a spouse or cohabitee	73(30.9%)	163(69.1%)	
Conscious sleepquality			
Not consciously sleep well	84(30.2%)	194(69.8%)	0.867
Conscious sleep quality	68(30.9%)	152(69.1%)	

Table S3. Differences in physiological and psychological categories of life quality, demographic variables, and pain perception (n = 498)

[illegible]

Table S4. Differences in social relationships, environmental categories, demographic variables, and pain perceptions of quality of life (n = 498)

Variable	People	Social relations category			Environmental category		
		mean±sd	t/F	Scheffe	mean±sd	t/F	Scheffe
gender							
Female	327	14.5±2.4	1.8		14.1±2.4	0.9	
male	171	14.1±2.4			13.9±2.7		
Race							
Reference ethnic	134	15.2±2.5	4.42***		15.7±2.2	9.4***	
Natives	364	14.1±2.4			13.5±2.4		
education level							
illiterate	77	14.1±2.8	-0.9		14.2±2.7	0.7	
Literacy	421	14.4±2.4			14.0±2.5		
marital status							
No spouse or cohabitee	261	14.2±2.5	-1.9		13.9±2.3	-1.4	
Have a spouse or cohabitee	239	14.6±2.3			14.2±2.6		
Sleep quality							
Not consciously sleep well	278	14.1±2.3	-3.2**		13.6±2.5	-4.3***	
Conscious sleep quality	220	14.8±2.5			14.6±2.4		
Pain							
1. No pain	152	14.7±2.4	2.0		14.6±2.4	5.8***	①>⑤ ②>⑤
2. Slight	159	14.3±2.5			14.2±2.6		
3. Moderate	78	14.3±2.3			13.8±2.4		
4. Stricter	67	14.5±2.5			13.8±2.2		
5. Very serious	42	13.5±2.1			12.6±2.2		
Whether there is pain							
NO	152	14.7±2.4	2.0		14.6±2.4	2.9**	
YES	346	14.2±2.4			13.8±2.5		

Note: * represents $p < 0.05$, ** represents $p < 0.01$, *** represents $p < 0.001$

Table S5. Differences in overall quality of life, demographic variables, and pain perception (n = 498)

Variable	People	Overall quality of life		
		mean±sd	t/F	Scheffe
gender				
Female	327	56.9±8.4	1.3	
male	171	55.8±9.3		
Race				
Reference ethnic	134	60.8±7.9	6.8***	
Natives	364	54.9±8.5		
education level				
illiterate	77	55.9±9.6	-0.6	
Literacy	421	56.6±8.6		
marital status				
No spouse or cohabitee	261	55.8±8.8	-2.0*	
Have a spouse or cohabitee	239	57.4±8.6		
Sleep quality				
Not consciously sleep well	278	54.5±8.4	-6.1***	
Conscious sleep quality	220	59.1±8.4		
Pain				
1. No pain	152	58.1±8.4	4.2**	
2. Slight	159	56.6±9.1		
3. Moderate	78	56.4±8.9		
4. Stricter	67	55.8±8.3		
5. Very serious	42	52.0±7.7		
Whether there is pain				
NO	152	58.1±8.4	2.6**	
YES	346	55.8±8.8		
Note:* represents p <0.05 ,** represents p <0.01 ,*** represents p <0.001				

Table S6. Multiple regression analysis of physiological category, psychological category, demographic variables, and presence or absence of pain (n = 498)

Project	Physiological category			Psychological category	
	β	SD	t value	β	
gender					
Male (ref = female)	-0.19	0.24	-0.81	-0.41	
Race					
Aboriginal people (ref=reference group)	-1.30	0.27	-4.84***	-1.13	
education level					
Literacy (ref = illiterate)	-0.07	0.32	-0.23	0.66	
Is there a spouse or cohabitant					
There are (ref = no)	0.56	0.22	2.49*	0.37	
Whether there is pain					
There are (ref = no)	-0.36	0.23	-1.53	-0.39	
Are you aware of good sleep quality?					
Yes (ref = No)	1.65	0.22	7.45***	1.10	
Age	-0.04	0.01	-3.60***	0.01	
Statistical check					
Adj R2	0.16			0.11	
F	14.87			9.95	
Note: *p <0.05 ,**p <0.001					

Table S7. Regression analysis of social relationship category, environmental category, demographic variables, and presence or absence of pain (n = 498)

project	Social relations category			Environmental category		
	β	SD	t value	β	SD	t value
gender						
Male (ref = female)	-0.56	0.23	-2.36*	-0.10	0.22	-0.44
Race						
Aboriginal people (ref=reference group)	-0.96	0.26	-3.67***	-2.07	0.25	-8.14***
education level						
Literacy (ref = illiterate)	0.63	0.31	2.00*	0.20	0.30	0.65
Is there a spouse or cohabitant						
There are (ref = no)	0.54	0.22	2.44*	0.32	0.21	1.50
Whether there is pain						
There are (ref = no)	-0.41	0.23	-1.80	-0.55	0.22	-2.46*
Are you aware of good sleep quality?						
Yes (ref = No)	0.57	0.21	2.65**	0.77	0.20	3.68***
Age	0.01	0.01	0.71	0.01	0.01	0.58
Statistical check						
Adj R ²	0.73			0.18		
F	6.59			16.93		
Note: *p <0.05 ,**p <0.01 ,***p <0.001						

Table S8. Regression analysis of overall quality of life, demographic variables, and presence or absence of pain (n = 498)

Samples	β	SD	t
gender			
Male (ref = female)	-1.27	0.80	-1.57
Race			
Aboriginal people (ref=reference group)	-5.47	0.89	-6.10**
education level			
Literacy (ref = illiterate)	1.43	1.08	1.31
Is there a spouse or cohabitant			
There are (ref = no)	1.80	0.75	2.38*
Whether there is pain			
There are (ref = no)	-1.72	0.79	-2.19*
Are you aware of good sleep quality?			
Yes (ref = No)	4.10	0.73	5.56**
Age	-0.02	0.04	-0.48
Statistical check			
Adj R ²	0.15		
F	14.25		
Note: *p <0.05 ,**p <0.001			